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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,902	09/25/2003	Karen M. Braun	A2227-US-NP	6024

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BASCH & NICKERSON LLP
1777 PENFIELD ROAD
PENFIELD, NY 14526

EXAMINER

DHINGRA, PAWANDEEP

ART UNIT	PAPER NUMBER
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2625

NOTIFICATION DATE	DELIVERY MODE
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12/23/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/670,902	BRAUN, KAREN M.	
	Examiner	Art Unit	
	PAWANDEEP S. DHINGRA	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/1/2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

- This action is responsive to the following communication: Amendment after final rejection filed on 10/1/2008.
- Claims 1-3, and 5-17 are pending.

Response to arguments

Applicant's arguments filed 10/1/2008 have been fully considered but they are not persuasive.

Applicant argues that Yamamoto fails to teach viewing the target under the illumination for which characterization is desired.

In reply, examiner asserts that as admitted by applicant that Yamamoto teaches in S3 of figure 8 that spectral reflectance of each printed gray color patch (S2) is measured under light source - D_{50} or A. Firstly, in order to measure the spectral reflectance of the patch, the patch has to be sensed / viewed either by a machine or person such that the reflectance of the patch can be measured. Examiner notes that claim does not mention that it has to be a user, who views the target.

Secondly, in paragraph 66, Yamamoto clearly teaches during calculating color difference, observing (viewing) each color patch (target) under the light source - D_{50} or A (illumination), for which characterization is desired. Yamamoto again teaches in paragraph 66 that tristimulus values are calculated based on the observation under the light source for which characterization is desired (see S2-S4 in figure 8 with corresponding text).

Applicant further argues that Yamamoto fails to teach selecting a best metameric pair match from said metameric pairs, which estimates said viewing illumination.

In reply, examiner asserts that best metameric pair match (patches with ΔE below threshold) are selected based on calculated color difference ΔE , which estimates the observing (viewing) of the color patches (target) under the light source - D_{50} or A (illumination) (see figure 8; paragraphs 60-73).

Examiner again notes that claim only mentions illumination. Claim is not limited to recite viewing target under only one illuminant and/or selecting best pair, which estimates said viewing of said illuminant as seems to be argued by the applicant.

Hence, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., see above) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Drawings

Previous objections to drawings are withdrawn in view of new drawings submitted by the applicant.

Claim Objections

Previous claim objections are withdrawn in view of applicant's amendments to claims.

Examiner Notes

Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5, and 7-17 are rejected under 35 U.S.C. 103 as being unpatentable over Newman et al., US 2003/0020727 in view of Yamamoto US 2002/0158933.

Re claim 1, Newman discloses a method for improving printer characterization to more accurately reproduce desired colors on a destination printing device (see figure 1) given the ambient illumination at the location where the printer's output is intended to be viewed (see abstract; figures 1, 3; and paragraphs 1,11-15), comprising: a) producing a target consisting of pairs of metamers (see S605-S607 in figure 6), where each pair

matches for one illuminant and mismatches for others (see figures 4, 6, 9; paragraphs 45-59, 63-64, 67, note that pair (metamer) consists of x, y, and z values, and each pair (xyz) matches for one illuminant (e.g. X_{D50} , Y_{D50} , and Z_{D50} are matched) and mismatches for others ($X_{D50}Y_{D50}Z_{D50}$ pair doesn't match with $X_A Y_A Z_A$ pair); c) selecting a best metameric pair match (i.e. best fit) from said metameric pairs, which estimates a viewing illumination (see figures 4, 6, 9; paragraphs 11-18 & 45-67); d) entering an indicator of a estimated viewing illumination (see paragraph 72); and e) adjusting the characterization data to correspond to a estimated viewing illumination (see paragraphs 65-72).

However, Yamamoto teaches b) viewing said target under the illumination for which characterization is desired (see figure 8; paragraphs 60-73, see explanation given in arguments section above); c) selecting a best metameric pair match from said metameric pairs, which estimates said viewing illumination (see figure 8; paragraphs 60-73, see explanation given in arguments section above); d) entering an indicator of said estimated viewing illumination (see paragraphs 60-73); e) adjusting the characterization data to correspond to said estimated viewing illumination (see paragraphs 60-73).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the color management system as disclosed by Newman to include the color printing techniques as taught by Yamamoto for the benefit of reducing "dependence of color appearance of gray image areas on the light source used" as taught by Yamamoto in paragraph 13.

Re claim 7, Newman further discloses rendering an illumination-determination target on a color reproduction device (i.e. printer) (see figure 1, and paragraph 59).

Re claim 8, Newman further discloses the illumination-determination target has been prepared in advance of characterization (see paragraph 59).

Re claim 9, Newman further discloses the illumination-determination target is shipped or otherwise provided with said destination printing device (see paragraph 59, note that the user can print the referenced spectral model provided with the device).

Re claim 10, Newman further discloses said indicator is entered via a Digital Front End or print driver to the printer (see figures 10-11).

[Note: Yamamoto also discloses said indicator is entered via a Digital Front End or print driver to the printer (see figure 8)].

Re claim 11, Newman further discloses a Graphical User Interface for indicating said estimation of illumination (see figures 10-11).

Re claim 12, Newman further discloses each illuminant of interest represented in said illumination-determination target is a profile (see figure 10-11, and paragraphs 72-73).

Re claim 13, Newman further discloses said profile is applied as a result of the indication of illumination (see figure 10-11, and paragraphs 72-73).

Re claim 14, Newman further discloses estimated illumination is used to modify said characterization via a pre- transformation or post-transformation (see figures 6-13).

Re claim 15, Newman further discloses device values for metamerich matches are derived using a cellular Neugebauer model (see paragraphs 54-57).

Re claim 16, Newman further discloses one half of each matched metamerich pairs is produced with black (K) only and the other half is produced with Cyan, Magenta, and Yellow (CMY) (see paragraphs 54-72, note that various combinations of K and CMY can be applied based on the desired illuminant source, device type and type of analytical model used for characterizing the device).

Re claim 2, Newman fails to further disclose that the production of the target comprises: a) choosing a base color; and b) for each illuminant of interest, determining a metamerich match to said base color; and placing said base color adjacent to said metamerich match to form a matched pair.

However, Yamamoto discloses the production of the target comprises: a) choosing a base color (i.e. black or K); and b) for each illuminant of interest, determining a metamerich match to said base color; and placing said base color adjacent to said metamerich match to form a matched pair (see paragraphs 4-11, and 60-81).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the color management system as disclosed by Newman to include the color printing techniques as taught by Yamamoto for the benefit of reducing

“dependence of color appearance of gray image areas on the light source used” as taught by Yamamoto in paragraph 13.

Re claim 3, Newman fails to further disclose said metameric matched pairs are produced using different colorants.

However, Yamamoto further discloses said metameric matched pairs are produced using different colorants (see paragraphs 4-11, and 60-81).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the color management system as disclosed by Newman to include the color printing techniques as taught by Yamamoto for the benefit of reducing “dependence of color appearance of gray image areas on the light source used” as taught by Yamamoto in paragraph 13.

Re claim 5, Newman further disclose converting said base color to device values, CMYK, using said re-characterization (see paragraphs 45-72).

Re claim 17, Newman further discloses producing said metameric pairs comprises, for each illuminant of interest: (see figure 6): a) printing Cyan, Magenta, Yellow, and black (CMYK) sweeps (see paragraph 59); b) measuring color values of said CMYK sweeps (see paragraph 59).

Newman fails to further disclose building gray-balanced Tone Reproduction Curves based on said measured color values; d) inputting a value n into said gray-balanced Tone Reproduction Curves to determine CMY colorant values; and e)

inputting said value n into said gray-balanced Tone Reproduction Curves to determine K colorant value.

Yamamoto discloses building gray-balanced Tone Reproduction Curves (i.e. gray-reproduction characteristics) based on said measured color values (see abstract and paragraph 66); d) inputting a value n into said gray-balanced Tone Reproduction Curves to determine CMY colorant values and e) inputting said value n into said gray-balanced Tone Reproduction Curves to determine K colorant value (see paragraphs 60-81).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the color management system as disclosed by Newman to include the color printing techniques as taught by Yamamoto for the benefit of reducing "dependence of color appearance of gray image areas on the light source used" as taught by Yamamoto in paragraph 13.

3. Claim 6 is rejected under 35 U.S.C. 103 as being unpatentable over Newman et al., US 2003/0020727 in view of Yamamoto US 2002/0158933 further in view of Well-known art.

Re claim 6, Newman fails to further disclose that the target includes either bipartite patches, concentric patches, readability tasks, or half-and-half images.

However, Official Notice is taken to note that targets (i.e. reference color test charts) includes either bipartite patches, concentric patches, readability tasks, or half-and-half images is notoriously well known and commonly used in the art. It would have

been obvious to use those target charts as a spectral model in the color management system of Newman for the benefit of enabling the user to estimate likely XYZ (i.e. color matching) values for the given color patch (see paragraphs 59 & 68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the color management system as disclosed by Newman to include the color printing techniques as taught by Yamamoto for the benefit of reducing "dependence of color appearance of gray image areas on the light source used" as taught by Yamamoto in paragraph 13.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAWANDEEP S. DHINGRA whose telephone number is (571)270-1231. The examiner can normally be reached on M-F, 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. D./
Examiner, Art Unit 2625

***/David K Moore/
Supervisory Patent Examiner, Art Unit 2625***